

HUMIDIFICATION OF HYDROCARBON MIXTURES FOR USE IN POLYMER SYNTHESIS

ABSTRACT OF THE DISCLOSURE

A humidification system **(A)** for humidifying a dry hydrocarbon stream includes a column **(10)** which defines an interior cavity **(20)**. The cavity is partially filled with a bed **(12)** of a packing material **(40)** and a layer of water **(20)**, leaving a headspace above the water. An inlet **(52)** adjacent a lower end of the cavity receives a dry hydrocarbon stream which is broken up by the packing material and dissolves water as it passes therethrough. Entrained water droplets fall out of the wet blend in a disengagement zone **(70)** above the water layer leaving the hydrocarbon stream humidified yet substantially free of liquid water in an upper region **(72)** of the column.